GIFT
MAY 8 1919

THE

Pacific Pharmacist

An Independent Journal Devoted to Progressive Pharmacy

Vol. 12 APRIL, 1919 No. 12

Single Copies, Ten Cents. 1294 Ninth Avenue, San Francisco, Cal. One Dollar per Year.

UNIVERSITY OF CALIFORNIA

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No-4

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Just how permanent is this immunity has yet to be established, but if it is for no longer than two or three months it is still a remarkable stride in preventive therapy.

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Should there be at any time a recurrence of the old disposition to "catch cold," administration of one or two doses of the vaccine are usually sufficient to dispel it.

Ask your Druggist for **"Cutter's"** Mixed Vaccine Respiratory Infections.

The Cutter Laboratory

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WHEN THE BOYS COME HOME

A PLACE MUST BE READY FOR EVERY RETURNING SOLDIER AND SAILOR PHARMACIST.

About ten thousand Soldier and Sailor Pharmacists will return to civil life. They have given up business or good position to answer the call of their country.

What are the "stay at homes" going to do for them? A period of reconstruction confronts American Pharmacy as it does every other endeavor. The reconstructive period will be quite as serious for those who are at home as it will for those who soon will commence to return. Every American Druggist is face to face with the highest duty to returning pharmacists, to himself and to American Pharmacy.

The American Pharmaceutical Association has appointed a Committee to handle the difficult problems about to arise along common sense and broad lines, so that true help may be rendered and conditions may not become chaotic. The Committee has an appreciation of its enormous task. It means to be helpful in many directions. Aside from finding places for every returning Pharmacist, it plans to secure for them registration and educational facilities of very great benefit.

WE NEED THE HELP OF EVERY DRUGGIST LOYAL TO COUNTRY AND PHARMACY.

THE ADVISORY COMMITTEE OF THE AMERICAN PHARMACEUTICAL ASSOCIATION FOR SOLDIER AND SAILOR PHARMACISTS.

C. O. BIGELOW, CHAS. E. CASPARI,
H. C. CHRISTENSEN, EDWARD SPEASE.
FRANK H. FREERICKS, Chairman.

Every American Pharmacist is urgently requested to immediately fill out and detach the following Questionnaire and mail it to Frank H. Freericks, Chairman, Mercantile Library Bldg., Cincinnati, Ohio:

STATE.................... CITY.................... STREET..................

1st: Give name and last-known address of employee, if any, now in the service.

....

2nd. Was he a registered Pharmacist or registered Assistant? ....

3rd: Is he a graduate in Pharmacy? ....

Was he attending College? ....

4th: Is his position with you open for him on his return? ....

5th: If you are the successor of one who is now in the service give his name and last known address. ....

6th: If a neighboring druggist has sold out and closed store to go into the service, give his name and last known address.......................................

7th: Will you have a position for a returning pharmacist when the time comes? If so, at about what salary? ....

8th: Do you believe it possible that you would have employment for a partly disabled Soldier or Sailor Pharmacist ....

9th: Would you consider selling your store to a returning Pharmacist? If so, what do you ask for it? ....

How much cash required? .... What is business annually? ....

10th: Would you entertain a partnership offer from a returning Pharmacist? If so, how much money required? ....

What is annual volume of your business? ....

(Signed) ....

The Committee will be under great expense to carry on its work. It will gladly accept contributions. If so disposed, make your check to H. M. Whelpley, Treasurer, and enclose with Questionnaire.

All information of a confidential nature will not be published and will be used in individual cases only.

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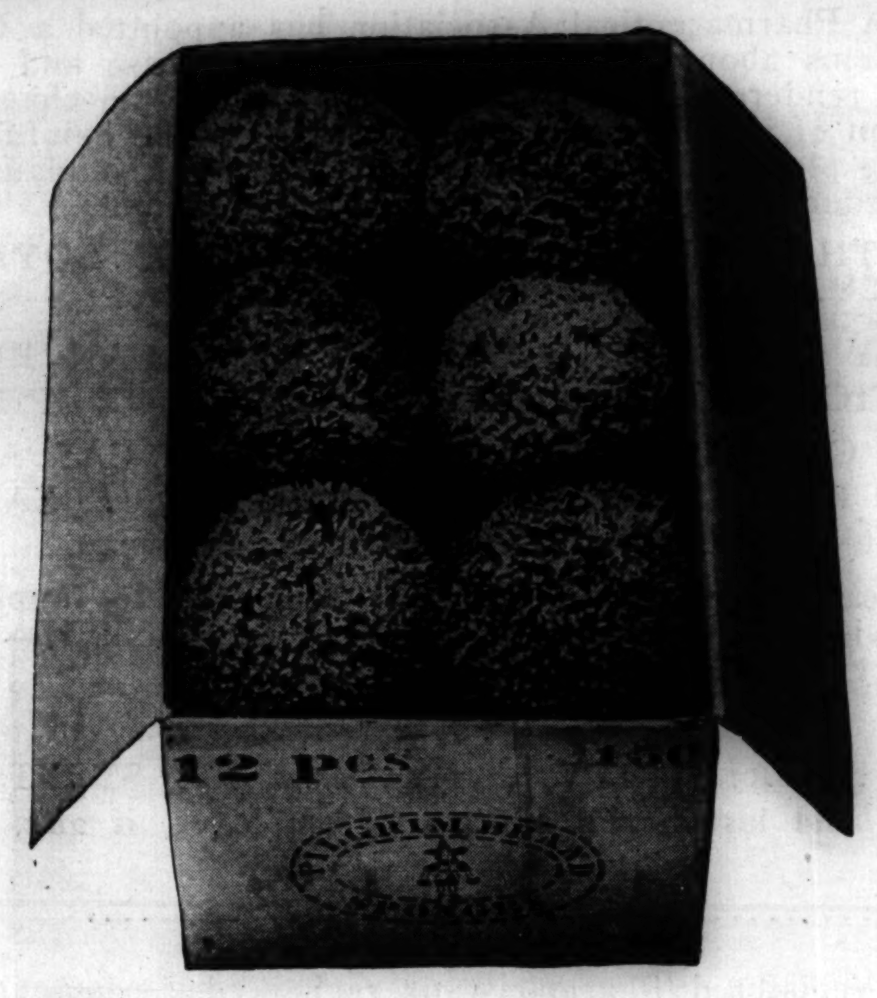

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—the non-poisonous
fly destroyer

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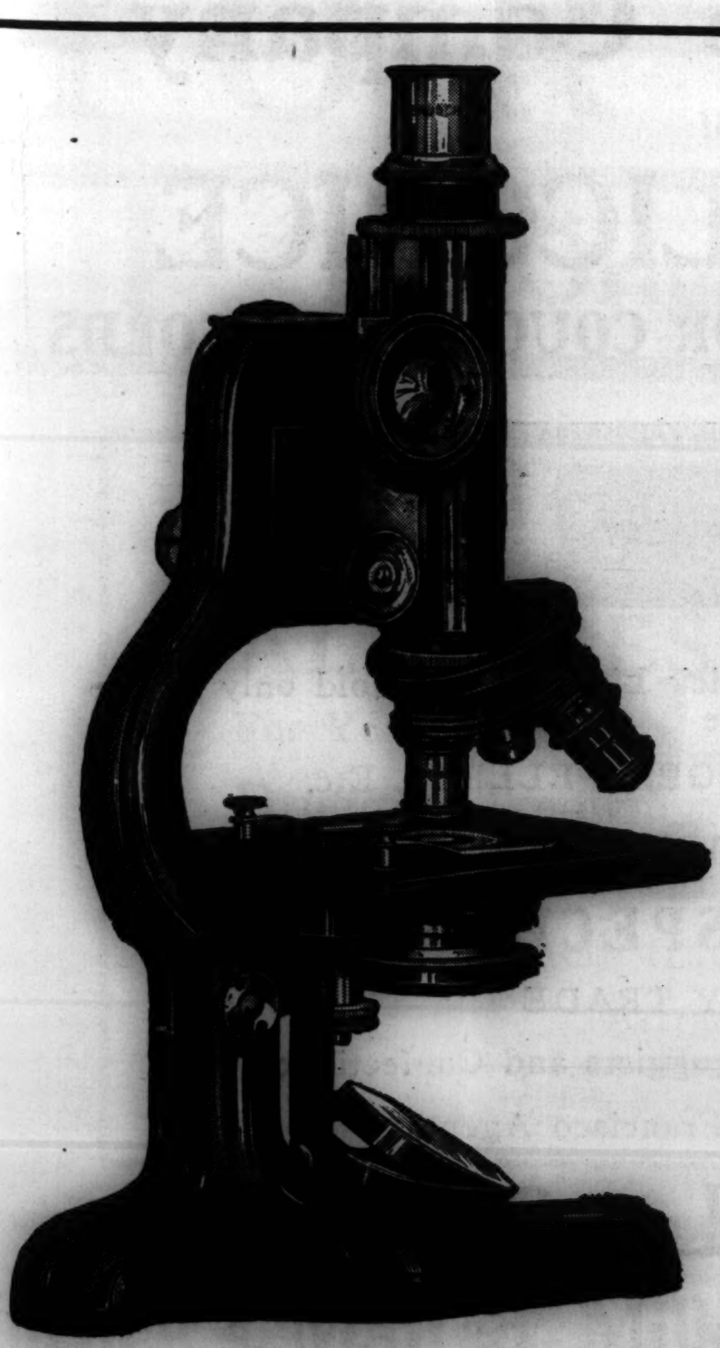

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of California

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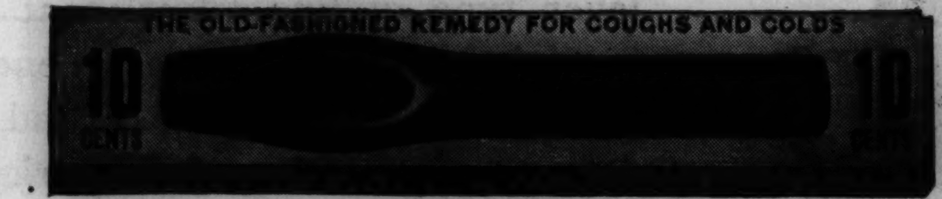

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COCOANUT
OIL**

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— by —

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The Original Malted Milk

The Food-Drink for

ALL AGES IN ALL SEASONS

For Your Fountain **For Package Sale**

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Next term opens September 1st. Send your credentials to the Dean at once to avoid delay in matriculation.

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Necco Sweets

Always sign of best in confections

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She—"One from the lower part of the animal, please, Hubby says most of your cuts are too high."—Answers.

Wild-eyed Customer—"I want a quarter's worth of carbolic acid and I want it quick."

Quick-witted Clerk—"This is a hardware store and we don't keep carbolic acid, but we have a fine line of ropes, revolvers and razors."—The Hearse.

Mrs. Murphy (shopping)—"I want to see some mirrors."

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Mrs. Murphy—"No; some that ye can see yer face in!"—The Red Hen.

Schoolmistress—"What is the most destructive force of modern times?"

Girl (without hesitation)—"The Laundry!"

Wise buying makes wages count more. Buy W. S. S.

"Well, what sort of wedding presents did you get, girlie—the usual assortment of berry-spoons and pickle-forks?"

"Not on your esteemed life. I got a sack of potatoes, four dozen fresh eggs, a peck of onions, and a Liberty Bond."

An Irish soldier coming out of ether in the hospital ward after an operation exclaimed audibly: "Thank God! That is over!"

"Don't be so sure," said the man in the next cot, "they left a sponge in me and had to cut me open again." And the patient on the other side said: "Why, they had to open me, too, to find one of their instruments."

Just then the surgeon who had operated on the Irishman stuck his head in the door and yelled: "Has anybody seen my hat?"

Saving is the quickest road to opportunity. Buy W. S. S.

PRESCRIPTION
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The reputation of the Druggist—the satisfaction of the Physician—and the welfare of the Patient require that chemicals used in dispensing should conform to the highest standards for purity. When ordering chemicals for the dispensing department

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Quantity discounts:
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Fellows' Syrup

IMPORTANT NOTICE

This is to remind you that most sales of FELLOWS' SYRUP OF HYPOPHOSPHITES are made on Physicians' prescriptions, in which case the profit to the retail druggist is nearly 100%.

This means that the Physician sends you a desirable customer; and the least you can do is to treat him fairly, and supply the preparation prescribed, Fellows' Syrup.

Members of the retail drug trade are warned against buying or selling colorable imitations of the well-known yellow-wrapped package of Fellows' Syrup. The highest Courts have decided that such an act is an infringement of the Trade-Mark Law, and makes the offender liable to a suit for damages.

THE

Pacific Pharmacist

An Independent Journal Devoted to Progressive Pharmacy

Vol. XII. APRIL, 1919. No. 12.

Published on the Fifteenth Day of the Current Month on behalf of the Pharmacists and in the interests of the Drug Clerks.

H. B. CAREY, Manager

Editorial Staff:

J. H. DAWSON H. B. CAREY F. W. DESSEL

Address all communications and make all checks and money orders payable to The Pacific Pharmacist, 1294 Ninth Ave., San Francisco, California.

Communications on questions pertaining to Pharmacy and the Drug Business are solicited. The name of the writer should accompany every article, not necessarily for publication, but as a guarantee of good faith.

EDITORIAL

REFERENCE BOOKS.

How many of us can boast of having the necessary and essential up-to-date reference books for the proper practice of our profession? We believe pharmacists as a class are very prone to neglect the purchase of essential and necessary up-to-date books. It is not necessary to have a whole library for reference in the practice of Pharmacy, but it is very necessary to have the latest editions of such well-known works as Practice of Pharmacy; the Ninth Edition of the U. S. Pharmacopoeia, the U. S. Dispensatory; a modern dictionary; a few good chemical reference books, as well as at least two or three of the modern monthly journals. These works are absolutely essential and necessary for the everyday reference of the pharmacist. If we can afford more we should have more.

We had occasion the other day to visit one of the modern, high-class pharmacies in San Francisco, and we were very surprised to find these latest works sadly wanting. It is just as essential for the pharmacist to keep up-to-date in his studies as it is for the physician and other professional men. Indifference and refusal to keep up-to-date is absolute evidence of professional incompetence.

THE PHARMACIST AND COMPOUNDER.

According to the interpretation of the Internal Revenue Department, "The term compounder" within the meaning of the Harrison law, defines the retail druggist as a compounder or manufacturer when he makes the Tincture of Opium or any narcotic preparation not exempt by Section 60 of the Harrison law and intended for sale as such. These preparations must have the proper stamp affixed and the dealer must pay the manufactures tax of $24 per annum.

However, if the pharmacist makes narcotic preparations to be only used in filling prescriptions he is not a manufacturer within the meaning of the law; therefore the $24.00 tax does not apply to him. This interpretation is very reasonable and probably will be announced in the form of a treasury decision.

REGISTER.

Under the new revenue law every pharmacist and physician must register within thirty days after the passage of the act. Because of the lack of blanks the time for registering has been extended to April 25th after which Uncle Sam may not deal with you leniently.

VICTORY LOAN.

We are now in the midst of a Victory Loan. Let us see to it that no support is lacking to make it a great success. It is a patriotic duty which we must attend to. Let us show the world that America lacks for nothing when great deeds are to be accomplished.

As a matter of investment, which is a point of secondary importance, it will prove highly satisfactory when one considers the leniency in tax exemptions. Here's to the success for the Victory Loan. Let the pharmacist not be found wanting.

LEGISLATIVE INTEREST.

It is too early to state whether any new laws of special interest to California pharmacy will be placed upon the books. The Anti Trading Stamp Bill passed the Senate by 23 to 15. It remains to be seen whether it will pass the Assembly. The next question will be whether Governor Stephens will sign it provided it does pass. The bill in our opinion is meritorious and should pass, in the interest of clean business methods.

The only bill which amounted to importance was strangled in committee. This was the bill fostered by the California Pharmaceutical Association. It carried the clauses for reciprocal registering and reduction of the number on the State Board of Pharmacy. In the spirited debate which followed, the Board of Pharmacy proved to be the better politicians. The Board of Pharmacy consists officially of only seven members but they sure do run pharmacy in California.

THE METRIC SYSTEM.

Not until recently has the use of the metric system of weights and measures impressed us as being of first importance in the world's trade. Strange enough the United States and Great Britain are the only great nations where the metric system is not extensively used. Europe with the exception of Great Britain uses the metric system exclusively. To do business freely with strange people it is of great advantage to use the same standards of measure.

It may not generally be known that the present coinage of Great Britain as well as the weights and measures of both Great Britain and America are of German origin. This condition of affairs was brought about by the old German Osterling Hanseatic League which for hundreds of years controlled the trade of England.

The origin, however, of our present weights and measures system has nothing to do with its discard. The fact is that our old system is awkward and obsolete, and more or less unknown outside of the English-speaking peoples.

The metric system is unquestionably the system of science. It is simple to understand, easy to calculate and must eventually be the system used. The quicker we make use of it in our everyday business the quicker we will enjoy better business dealings with our foreign neighbors. Why not encourage a more thorough study of the metric system in our school system?

THE NARCOTIC TAX.

It will be well for pharmacists to acquaint themselves with the provisions of the new revenue law as applies to narcotics. The pharmacist is not only required to re-register within thirty days, but is required to pay a tax of $24.00 per year provided he is a manufacturer. In addition to this he is required to pay the annual retailer's tax of $6.00. Physicians are now required to pay a $3.00 annual tax.

CINCHONA IN ECUADOR.

According to Doctor Rose of the United States museum who recently returned from a trip of exploration in Ecuador, there is plenty of Cinchona in Ecuador. Doctor Rose urges that

Americans co-operate with the people of South America to make available the large supply of this important drug. Doctor Rose finds great forests of wild Cinchona trees which thus far have not even been touched by man. He also believes the government should attempt forestation.

It appears from the report that the natives of Ecuador are lacking in money and methods of practically handling Cinchona bark. The great shortage of shipping seriously interfered with this work during the war. The doctor is able to supply the names of several persons who can immediately supply large quantittes of Cinchona bark.

BACK 'EM IN A CORNER.

Hardly a day passes but you hear someone say he is not going to subscribe to the Victory Liberty Loan or that he is through working, or has bought all the bonds he can, or some other pessimistic talk.

If you meet one of these lukewarm patriots, back him into a corner and remind him of these facts:

When America entered the war the duty of the people at home was as clearly defined as that of the soldier.

The soldier offered to give all—to make the fight for our liberty and the liberty of all free peoples. His was a duty which might mean giving his life—the supreme sacrifice.

The duty of the people at home was small compared to this, but it was just as clearly defined. That duty was to put up our money at a good rate of interest to make it possible to fight the battle for humanity—certainly a small obligation when compared to giving your life, wasn't it?

One cannot hear this talk about not buying VICTORY LIBERTY BONDS or not helping to sell bonds without getting mad about it.

What would these same people say if—as soon as the armistice was signed—the soldiers in France and America and the sailors had quit cold? What would they have said if the troops had laid down their arms and the sailors quit and refused to bring our loved ones home?

Can't you hear these very people calling the soldiers and sailors a bunch of traitors and slackers for not sticking to their job until it was finished?

And they would be right, wouldn't they?

Is it any more the duty of the soldiers and sailors to finish their job than it is for us to finish ours?

Forty thousand of our boys have paid the price of liberty with their blood.

Every other soldier and sailor is sticking to his job, doing his duty like a man.

Are we going to be less men, less Americans than they?

Of course we're not. We're going to do our duty the same as they are doing theirs.

That duty just now is "putting over" the VICTORY LIBERTY LOAN. AND WE'RE GOING TO DO THAT DUTY!

CALIFORNIA PHARMACEUTICAL ASSOCIATION.

The 1919 meeting of the California Pharmaceutical Association will take place in San Francisco, May 27, 28 and 29. It is hoped that this meeting will be one of the best which the association has enjoyed. There are many problems which should receive attention.

K. B. Bowerman will be in charge of local arrangements. The pharmacists of San Francisco will exert themselves to the utmost to fittingly entertain guests from out of town. Mark down on your calendar May 27, 28, and 29 in San Francisco.

SODA FOUNTAIN.

To-day more than ever before the soda fountain is looked upon as a necessity. People insist upon having some form of beverage to please the palate. The countless forms of harmless drinks served at the fountains do this. Now that the saloons are going out of fashion we can justly expect the soda fountain business to increase fourfold over what it was last year.

Those of us who are situated so as to take advantage of this new business should give it early attention. If we must engage in side lines, why not deliver goods that bring a reasonable return? In our opinion the soda fountain has these possibilities.

WATER GLASS.

Sodium Silicate.

R. M. Rowat, Public Analyst, submits the following report, dealing with the analysis of 71 samples of Water Glass, collected on the order of July last. Of those samples, 8 were analyzed at Halifax, 22 at Winnipeg, 3 at Vancouver and the remainder at Ottawa.

This is the first occasion that this material has been subjected to examination in these laboratories, hence a brief review will be made of the nature of water glass.

Water glass is not a pure chemical compound; it is not a chemical individual. The product marketed under this name is usually a concentrated solution of mixed silicates of soda, and in pre-war days it also frequently contained silicate of potassium.

It is usually prepared by fusing 2 parts of sand with 1 part of carbonate of soda and 0.1 part of charcoal. Sodium hydroxide or sulphate sometimes replace the carbonate. After fusion, the glass-like mass which has been formed is broken up, leached with hot water, and the resulting solution evaporated to a viscous syrup. This syrup is the article commonly sold as water-glass. The solution contains an indefinite mixture of the ortho and meta-silicates of sodium, and the constitution of the dry material varies between the limits of $Na_2O.2SiO_2$ and $Na^2O.4SiO_2$. The chief impurities found in commercial water glass are chlorides, sulphates, and small amounts of iron. These are frequently present to the extent of 2 per cent. or more.

Sodium silicates have long been used for imparting a fireproof character to wood and other materials, and more recently for producing artificial stone for building purposes, and for a peculiar kind of permanent fresco-painting (stereochromy) the results of which are intended to withstand exposure to the weather. Its more common use in rural communities, however, is as an egg-preserver. For this purpose, this substance has been shown to be, all things considered, decidedly the best known at the present time. It is relatively inexpensive, clean and easy to handle, and does not, as do lime, salt, and other chemicals, tend to impart any noticeable flavor and eggs preserved in it will remain in satisfactory condition for a year, and even longer.

The excellent reputation which this matter enjoys, has created a considerable demand for it, and as a natural consequence a number of manufacturers have each placed upon the market brand of water-glass. Since water-glass is not itself a definite chemical compound; since the methods of its manufacture differ in themselves; and since no arbitrary standards have been set to which this product must conform, it is not reasonable to expect all brands of commercial water-glass to be uniform in character.

In general it may be stated that the water-glasses at present found on the market can be divided into two classes, viz:

(1) Solutions of sodium silicates of specific gravity 1.30 to 1.45, perfectly fluid, and containing from 26-33% of total solids, generally labeled Improved Water-Glass.

(2) Solutions of sodium silicates of specific gravity 1.65-1.75 semi-solid, and containing from 53-57% of total solids.

All brands of water-glass are put on the market in small tins of an average content of 300cc. and in larger tins containing 600cc. The smaller tin will hold about 17 ounces of 1.7 Sp. Gr. water-glass, and about 13 ounces of 1.3 Sp. Gr. water-glass. A small tin of the heavy solution sells for 20 cents and the same size tin of weak solution for 15 cents. When it is considered that the weak solution is the cheaper of the two to manufacture, and that it contains little more than half as much sodium silicate as the strong solution, these prices appear decidedly out of proportion to the value offered. In general the weak solution costs the consumer 2.5 times as much as its equivalent in the heavy solution.

The thin liquid has one advantage over the denser article, namely that it is more easily handled. This advantage, however, hardly warrants the difference in the price of the two articles.

As a result of this investigation I am of the opinion that water-glass is an article which it would be in the interest of the public to standardize, and I present this report with the hope that the information it contains may be sufficiently full to allow you to fairly define this product.

THINGS WORTH KNOWING.

Never stock cheap shoddy tooth brushes. A shoddy tooth brush is a deliberate client-loser.

Don't lose your temper with an insolent customer. Should reasoning fail, then "Silence is golden."

To powder shellac add a few drops of water, then grind with the pestle. The water gives the starting grip.

Don't let anyone bully you into hastening your dispensing. Be quick by all means, but let your password be "Accuracy."

Don't increase the price of an oft-repeated prescription unless you will actually lose money at the old price. "Repeaters are suspicious of price-changes."

If you wish to enforce punctuality on your staff, make punctuality your own motto. Then you will be in a position to see that your orders are carried out.

Medicinal syrups should always be stored in a cool place. Neglect to do this results in recrystallization of sugar with precipitation of metallic salts or fermentation of organic bodies.

Don't promise to procure an article by any definite date, but try your utmost to get it. Under present conditions promises should be guarded, then no one will be disappointed.—Chemist and Druggist.

LABORATORY AND DISPENSING SUGGESTIONS.

Scale Salts with Glycerin.—In filling prescriptions calling for scale salts, when glycerin is one of the ingredients, shake the scale salt well with the glycerin before adding water or other aqueous menstruum; the scale salt will dissolve almost instantly.

Saturated Solution of Potassium Iodide.—To prepare quickly put the required amount of the salt in a bottle and add distilled water which is boiling hot; the potassium iodide dissolves immediately and the solution can be filtered in a few minutes. Fracture of the bottle must be guarded against.

Short-cut in Making Suppositories by Hand.—When shaping suppositories by hand, make two at one time, taper both ends and cut in the center.

Making Blaud's Pills.—It is so easy to get the mass of ferrous carbonate too soft, when making the pills. If only just enough glycerin and water is added to the mass may invariably be counted on to be of the right consistence.

Paraffined Corks.—Corks dipped in melted paraffin should always be used for stoppering bottles containing syrupy liquids and ammonical preparations. Paraffined corks are better than rubber corks for tincture of iodine.

Aromatic Elixir.—Compound spirit of orange should be kept in a cold place three or four months before it is used, to blend the oils. It is worth while, for the flavor will improve greatly. This blended spirit and the use of an equivalent amount of sugar instead of syrup directed will make an aromatic elixir that is very pleasant and better than the average. Syrup will sometimes acquire a foreign odor, especially if it is made from beet sugar.

Liniment of Soft Soap.—Use the following formula, which will yield a strictly U. S. P. product: Cottonseed oil 279.5 grammes; potassium hydroxide, 55.9 grammes; distilled water, 65 mils; oil of lavender, 20 mils; alcohol, enough to make 1000 mils. Dissolve the potassium hydroxide in the distilled water and pour the hot solution into a graduated bottle containing the cottonseed oil, which should be of the same temperature as the alkali solution. Add 100 mils of alcohol, shake until the oil is completely saponified, then add at once about 300 mils of alcohol and shake. When cool add the oil of lavender and enough alcohol to make 1000 mils. Filter.

Alkaline Antiseptic Solution. — Use the following solution of oils, etc., and your solution will be uniform in flavor: Thymol, 4 grammes, eucalyptol, 4 mils; oil of peppermint, 4 mils; methyl salicylate, 8 mils; alcohol, enough to make 300 mils. For 1000 mils of the alkaline antiseptic take 15 mils of this solution and 45 mils of alcohol. If the solution of the oils, etc., is kept in a cold place a month or more before using, the ingredients will blend and give a finer flavor.

Coconut Oil Shampoo. — Potassium hydroxide, sodium hydroxide, of each 12 drams; coconut oil, 12 fluid ounces; alcohol, 6 fluid ounces; distilled water, enough to make 5 pints.

SPECIALIZE YOUR ADVERTISING.

The real object of newspaper advertising is to bring the people to your store. The shortest route to this goal has been found to be copy with real big punch. If possible, arrange a few specials that will attract attention—specials that will stand out as leaders. Many have found selling value by including in the copy a group of items that are always needed during house cleaning. One enterprising druggist last fall concentrated his efforts on rubber gloves. Another selected floor polish for the feature of his campaign, while still another featured his general lines. All had highly successful campaigns.

The druggist who decided to specialize on rubber gloves chose a novel way for attracting attention to them. A few pairs of the gloves, inflated with air, were shown on a glass case that occupied a conspicuous position in the store. The inflation was easily accomplished by drawing the wrists of the gloves over glass tumblers and then blowing them up with a straw inserted between the side of the glove and the tumbler.

In the daily papers the druggist made a splurge about giving away a real gas ballon free to every child who would write out the reason why mother should wear rubber gloves. The children had to appear in person for the balloons and generally their parents or other older persons would accompany them. Of course, the mother often suggested to the child the reasons for the wearing of the gloves and therein was one of the secrets of the success of the plan. Mother herself got interested in the gloves. Another selling point rested in the fact that the children brought the older people into the store.—The Miller Profit Maker.

OITICICA OIL—A NEW DRYING OIL.

By E. Richards Bolton, F.I.C., and Cecil Revis, F.I.C.

During the early part of 1917 we examined a new oilseed sent apparently for the first time from Brazil, bearing the native name of oiticica or oilizika.

The sample consisted of kernels which were oval-shaped and averaged in length from about 2.8 to 4 cm., and in diameter 1 to 2 cm., ten seeds weighing about 35 grms. The kernels readily split into separate portions, much in the same way as do the seeds of *Theobroma cacao,* and, in fact, they closely resemble these seeds in color, being perhaps rather redder in tone, but having a characteristic veining on the outer surface. They have a peculiar and very distinctive smell, which might be described as a heavy and overpowering odor, rather recalling the smell of tung oil, a very interesting property, seeing that the oil, as subsequently described, bears a distinct resemblance to tung oil. There was considerable difficulty in tracing the botanical derivation of these seeds, but it now seems certain that they are the seeds of *Conepia grandifolia,* natural order *Rosaceæ.*

The kernels contain 62 per cent. of an oil, which at normal temperatures is semi-solid, though at higher temperatures the solid portion may be seen to be contained in a medium of liquid oil. The color of the solidified oil is a pale cream-yellow, while the liquid is a bright golden-yellow. The mass solidified with a crenated surface.

The nature of the oil present in the seeds was such that special arrangements had to be made in order to avoid the absorption of oxygen from the air, which takes place exceedingly rapidly as soon as the oil is in a liquid condition. For this reason the drying and storing of the oil were carried out in an atmosphere of carbon dioxide, and special precautions were taken to avoid oxidation during the measuring of the various quantities for analysis. So long as the oil is in the solid state it does not appear to be so sensitive to oxidation.

The following analytical figures were obtained:

Melting-Point—As the oil consists of a mixture of oils varying from liquids to hard solids, no definite figures can be given to represent the melting-point of the oil, and the points of incipient and complete fusion must both be considered.

Incipient fusion..... 21.5° C.
Complete fusion..... 65.09° C.

Iodine Value, 179.5.

Saponification Value, 188.6.

Free Fatty Acids as oleic, 5.7 per cent.

Unsaponifiable Matter, 0.91 per cent.

Sp. Gr. at 15.5°/15.5° C., 0.9694.

Refractive Index at 40° C. Zeiss, beyond the scale of the Zeiss butyro-refractometer.

Hexabromide Test.—Only small traces of hexabromides separated when carrying out the test in the ordinary way, but the solution on standing at ordinary temperature for two or three days turned a deep brown color, and precipitated a pale liquid which was not further investigated.

FATTY ACIDS.

Melting-Point—
Incipient fusion.....53.7° C.
Complete fusion.....67.0° C.
Titer Test............42.8° C.

An attempt was made to separate the liquid fatty acids and obtain their iodine value, but the difficulties involved in attaining the separation of these acids without oxidation proved so great as to render the results unreliable.

In order to obtain some idea as to the value of the oil to the varnish and paint maker, the following experiments were also carried out:

1. *Heat Polymerization Test.*—The oil was heated to a temperature of 250° to 270° C. in an atmosphere of carbon dioxide (in order to avoid oxidation) for thirty minutes, during which time no solidification took place, though a sample of tung oil treated in the same way solidified. It was noticed, however, that during the heating very small bubbles of gas commenced to form as soon as the temperature reached 190° C., but it was not until the temperature reached 280° C. that these bubbles increased to a noticeable extent. Upon reaching 300° C. very large bubbles swelled up indefinitely when mixed with were evolved, and the mass set (polymerized). The mass so formed was a

stiff, clear, transparent jelly, which an oil such as linseed or a solvent such as chloroform, and, although no solution apparently took place, the whole mass became gelatinous. It should be noted that the jelly formed by this oil is, as stated above, clear and transparent, while that formed by tung oil under similar conditions is of a distinctly turbid nature. The quantity of oil at our disposal did not allow of any examination of the gas evolved on polymerization.

2. *Oxidation Tests.* — A portion of the oil heated in a thin film at 100° C. for three hours gained in weight 4 per cent. Further heating up to twenty-four hours only showed a total gain of 4.5 per cent. The skin produced in this way is practically insoluble in petroleum spirit, chloroform or acetone. (Tung oil, when treated in the same manner, only increased by 2 to 3 per cent. in weight.) As the oil dries the surface becomes much wrinkled, and there is evidently considerable increase in volume, as is usually the case when such solidification takes place.

A solution of the oil in commercial benzene, when allowed to dry in a thin film on glass, produced a uniform skin, more transparent and continuous in character than is the case with tung oil.

3. *Metallic Driers.*—One or two experiments were tried in this connection, but were not carried out in an exhaustive manner. On the addition of lead acetate to an alcoholic solution of the sodium soaps, a lead compound is formed, as in the case of tung oil, but the substance so produced is of a more granular character than in the case of that oil. These lead compounds are soluble in hot linseed oil when mixed with it in small quantities.

The above experiments all tended to show that this oil has very remarkable properties, which place it in a distinctly unique position, and there seems every reason to suppose that the oil is worthy of the attention of the varnish-maker, and possibly of those interested in the manufacture of linoleum, but for these purposes it will be necessary to obtain the oil on a commercial scale. Though, as has been pointed out above, special precautions were taken to obtain the oil in an unaltered condition, this was rather for the purpose of obtaining correct analytical figures, and it is quite possible that the oil could be expressed in the ordinary way without serious deterioration, particularly if it were solidified as rapidly as possible after leaving the presses. Even in the liquid condition there is no doubt that a protective film would form on the surface and prevent further change in the bulk.

We desire to express our thanks to Messrs. Booth and Company, London, Limited, and Messrs. J. H. Rayner and Company for the specimens of the seeds upon which our experiments were carried out.—From *The Analyst,* July, 1918.

TAX NEWS.

Soft Drink Tax Collection.

The Internal Revenue Bureau is considering the method of collecting the tax on soft drinks imposed by the new revenue law and effective May 1, next, particularly the tax to be collected at soda fountains and in ice cream parlors and similar places of business. Secretary Samuel C. Henry, of the National Association of Retail Druggists, has suggested a check system as being the easiest method for retail druggists. His plan provides for white checks for the payment of the price of soft drinks and checks of different colors, denominated tax checks, for the payment of the tax. A consumer would buy the regular soda water check and the tax check at the same time. Both would be handed to the dispenser of the soft drink when furnished the consumer. The dispenser would deposit the regular checks in one box and the tax checks in another. The tax checks would be printed in denominations of 1, 2, 3, 4 and 5 cents, if necessary. The 1 cent tax check would be sold the purchaser, on all soft drinks retailing at 10 cents or less; the 2 cent check, for all selling at 20 cents and more than 10 cents; the 3 cent check, for all drinks selling at 30 cents and more than 20 cents; the 4 cent check, for all drinks retailing at 40 cents and more than 30 cents, and so on. At the end of each day a retail druggist would add up the 1 cent, 2 cent, 3 cent, 4 cent and 5 cent checks and record the totals of each. These totals could be preserved and added up at the end of each month. The totals on each account could then be returned in duplicate under oath to the local revenue collector, accompanied by a remittance for the entire amount of the tax collections. In this way a druggist would not be required to keep books or any other burdensome records and he would be ready for a revenue inspector at all times, confident that his records and return would be found to be correct in every respect.

Coffee, Chocolate, etc., Taxable.

Notwithstanding a former informal ruling by an official of the Internal Revenue Bureau that coffee, tea, chocolate, cocoa and similar hot drinks sold at soda fountains would be considered articles of food and therefore not taxable under the new revenue law as soft drinks, one of the deputy internal revenue commissioners yesterday informed counsel for the N. A. R. D. that in his opinion the Department would finally hold that hot drinks sold at soda fountains are taxable as soft drinks. Moreover, it might further hold that sandwiches sold at soda fountains are also taxable. It is contended that hot drinks and sandwiches should be taxed under the language of the statute providing that "similar articles of food or drink" are subject to the soft drink tax.

Soft Drink Containers Taxable.

It is learned on good authority that the Internal Revenue Bureau will likely hold that the tax on beverages in bottles or other closed containers imposed by the new revenue law applies to the bottles or other containers as well as to their liquid content. The basis for this expected ruling is the contention that the tax is on the manufacturer's selling price and the manufacturer's selling price includes a charge for the bottles, or other containers, with the privilege extended dealers of returning same and receiving a rebate.

Definition of "Other Similar Place of Business."

The Internal Revenue Bureau is endeavoring to decide whether a lunchroom, restaurant or hotel selling ice-cream or sundaes or soda water, or other soft drinks, is subject to the provision of the new revenue law taxing soft drinks when sold in such establishments. Soda fountains and ice cream parlors are clearly within the law because specifically included, but the Department is doubtful as to whether a hotel or a restaurant selling ice cream and soft drinks incidentally is a place of business similar to an ice cream parlor or a drugstore with a soda fountain. If hotels and restaurants selling such articles are not held to be within the new revenue law, retail druggists maintain that they will be the victims of unfair and unjust discrimination.

The Telephone Tax.

Retail druggists will not have to bother about the new telephone tax, effective April 1, 1919. This tax must be collected by the telephone companies. Monthly toll service statements to subscribers will show messages on which the tax is imposed and its amount, in addition to regular charges for toll calls. Public telephone operators will include the tax in the total charges.

Narcotic Tax Stamps.

The Internal Revenue Bureau is still considering the form and sizes of the stamp which shall evidence the payment of the tax on narcotic drugs or preparations thereof levied by the new revenue act. It has received recently a suggestion from a prominent manufacturer that the stamps will have to be printed in various sizes and forms to accommodate the different sizes of bottles and containers. For example, a 15 grain bottle containing a narcotic is 1⅞ by ⅝ inches in diameter; a ⅛ ounce bottle, 2⅛ by 1 inch in diameter; a ¼ ounce bottle, 2¾ by ⅞ inches in diameter; and so on up to a one-ounce bottle, which is 3¼ inches by 1⅛ inches in diameter.

The Department holds that the tax will have to be affixed to every individual unit, or container, so that manufacturers will in all probability have to rearrange their system of packing and shipping. The stamp will have to be affixed to every container, however small.

Entire Volume Taxed.

The Department holds that the narcotic tax applies to the entire volume of a narcotic drug or preparation and not to the narcotic content alone. In other words, the vehicle used for purposes of solution or preservation, alcohol for instance, will be taxed as well as the narcotic drug.

Records and Returns by Manufacturers.

Importers, manufacturers and wholesale dealers who handle narcotic drugs or preparations thereof must keep books and records and render monthly returns to local revenue collectors, in accordance with a regulation soon to be issued by the Internal Revenue Bureau. The new revenue law requires this.

Taxes and Selling Price.

The taxes on proprietary and toilet articles provided for in the new revenue law will be collected in the form of stamps cancelled and affixed by retailers to the articles at the time of sale, but the cost of the stamps may be included in the retail price of the articles. The law is clear as to this, because it requires the consumer to pay the tax in distinct terms. The Internal Revenue Bureau, however, holds differently with respect to the tax on taxable clothing and similar articles. In such cases it holds that retailers cannot include the tax in the selling price, but must specify the amount of the tax when collecting it from the purchaser. This rule is designed to prevent the raising of prices of taxable clothing more than the amount of the tax.

Prosecuting Food and Drugs Act Violators.

The Department of Justice, at the instance of the Department of Agriculture, is actively engaged in enforcing the Food and Drugs Act prohibiting the adulteration of articles of food and drink. No less than two thousand quart bottles of vinegar, carried in stock by half a dozen wholesale and retail grocers of the District of Columbia, were seized by the United States District Attorney a few days ago because adulterated largely with water. This stock is subject to condemnation and destruction.

Taking Care of Returning Soldiers.

Jobs will be furnished returning soldiers and sailors if the U. S. Chamber of Commerce can by its able efforts arrange this. A special bureau for expediting the work is being organized, under the supervision of a committee consisting of Mr. Samuel C. Dobbs, vice-president of the Coca-Cola Company of Atlanta, Ga., and other prominent and influential business men. They are asking the co-operation of all business and trade organizations and no doubt will receive it. The matter has been brought to the attention of the Executive Committee of the National Association of Retail Druggists, which has looked after the welfare of pharmacists ever since the declaration of war and the signing of the armistice, as well as before.

Barring German Dyes and Chemicals.

Importers of German dyes, chemicals, fertilizers and other products will be prosecuted by the Alien Property Custodian for infringement of patents licensed under the Trading With the Enemy Act for use by American manufacturers. Germany will not be permitted to undersell and stifle infant American industries in these lines.

Have a personal share in the future. Buy W. S. S.

TENTATIVE PROGRAM OF THE CALIFORNIA PHARMACEUTICAL ASSOCIATION, MAY 27, 28 AND 29.

Tuesday, May 27.

10 A. M. Address of Welcome, Mayor Rolph.
Address of Welcome, J. M. Stanton, Pres. S. F. R. D. A.
Address of Welcome, R. R. Zane, Pres. A. D. T.
Address of Welcome, A. J. Neve, King Castor Bean of the Brunifferie.
Response by Pres. Frank T. Gardner.
Seating of Delegates.
Routine Business.

Afternoon Session.

2 P. M. Papers, Addresses, Etc.
9 P. M. Entertainment by Brunifferie. A Smoker and Initiation Ceremonies.
Ladies entertained by Bruin Fairies. Initiation and Installation Ceremonies.

Wednesday, May 28.

10 A. M. Business Session.
2 P. M. Business Session.
3 P. M. Ladies' Card Party.
8 P. M. Dance.

Thursday, May 29.

10 A. M. Business Session.
2 P. M. Business Session.
Automobile Ride for Ladies with light refreshments served en route.
8 P. M. Dinner and Cabaret.

Of course these plans are subject to change as circumstances may demand. There is no question, however, but that the visiting druggists and their families will have a good time.

The Allied Drug Travelers have gone enthusiastically to work on the entertainment features, the Brunifferie will stage their beautiful and mirthful initiation, and the druggists of San Francisco quite generally, wholesale and retail, will have the glad hand of welcome extended.

It is possible (although nothing definite is as yet known) that the reduced railroad fares (summer rates) will be in force by the time of the meeting.

Hotels are plentiful. Nowhere else on the Pacific Coast, with exception perhaps of Los Angeles, are there so many hotels and such first-class hotels as here. You may be sure you can secure accommodations to suit your purses. We would advise you, however, to give this matter of hotel reservations early consideration. San Francisco is a rapidly growing city and strangers arriving without reservations sometimes find it difficult to secure just the rooms they would desire to have.

The headquarters will be at the Hotel Whitcomb, a strictly modern, fireproof Class A building. It is desired to have as many members stop there as can arrange to do so, as it is probable the business sessions will be conducted under the same roof, or in the immediate vicinity. K. B. B.

Dr. Josephine Barbat Winslow, President of the Ladies' Auxiliary for San Francisco, has appointed the following members to work with the San Francisco druggists in preparing the program of entertainment: Miss Pauline J. Nast, Mrs. Richard Rees, Mrs. N. Schwartz, Mrs. K. B. Bowerman, Mrs. Lou Harris, Miss M. Packsher.

It will be the province of these ladies to prepare entertainment for their visiting sisters and to see that they are made comfortable and happy while within our gates. They will have charge of the card party and the automobile ride.

A little chap was asked to name the comparative degree of "sick."

"Worse," said he.

"Well, if 'worse' is the comparative of 'sick,' what would you give as the superlative?"

"Dead," was the instant answer.—Harper's Magazine.

For a peaceful nation, for a peaceful family—buy W. S. S.

LEGAL POINTERS FOR THE PHARMACIST.

Buying Goods After Inspection and Getting Something Different.

The question involved in the letter which I reproduce below often arises in the experience of merchants, and is liable to arise anywhere at any time. The question is this:

When a merchant buys goods after partial inspection, relying upon the seller's statement that they are all of a certain grade or quality, what is his status when he finds, upon delivery and after he has paid for them, that they are not what he thought they were, and what should he do in order to protect himself?

Last November the writer went to Illinois and purchased three carloads of broom corn from H. & Co. Two we had shipped immediately.

The third car, which was stored in their warehouse there at the time, appeared to be a nice block of pea green, self-working standard Lindsay brush. This was piled in one corner of the warehouse, three bales high.

The writer examined bales in the front rows and a few on top, and same appeared to run about as front rows. We asked Mr. Watkin, who had charge of the warehouse, whether the corn in that block ran the same all through as the front rows. He said it did.

On the strength of his assertion we bought this block, which consisted of sixty-two bales, and in addition to this we bought about six bales of a good grade of Illinois corn, running to hurl, to make a full car.

We had H. & Co. carry this corn for us, paying interest, storage and insurance until last month, when we had it shipped East. Same reached us about ten days ago.

It was sent draft attached to bill of lading, and of course we lifted the draft, expecting the corn to be just what we bought and what was billed to us, viz., sixty-two bales of self-working Lindsay standard corn.

When the first load was brought in, we were very much surprised on account of its short, coarse red and yellow appearance. However, we thought there might have been a few bales of that in the pile, and probably the rest of the car would be running nicer. However, we continued unloading, and found that fully half of it was very undesirable stock, and among the sixty-eight bales there was but one bale of pea green corn among it.

It appears to us as if they had sold our car of corn and substituted one of considerable less value. We telegraphed H. & Co., therefore, that there was an error in the shipment and they should come look at it. They wrote to their former manager at the cantonment and he informs them that the writer was all around the corn and on top of it and knew what he was buying. This, of course, is a false statement, because the corn was piled in a corner and I could not get all around it nor see through the pile, as there was none of it pulled down to look it over. The writer simply took the manager's word that it was the same all through the pile as the outside rows.

Any person acquainted with broom corn looking at this can readily see that the corn is no comparison to what their letters and invoice calls for, namely, sixty-two bales self-working Lindsay standard corn.

The price paid for the Lindsay corn was a fair one at that time, for that class of brush, namely, 20 cents per pound.

We are of opinion that they had an opportunity to sell it for more money, and no doubt substituted something cheaper for us.

What can we do in this matter in order to get back some of our wasted money?

ACME BROOM WORKS.

Hamburg, Pa.

The truth of this case lies between these two hypotheses:

1. H. & Co. did not ship the corn

this correspondent bought, but a different and inferior lot; or,

2. H. & Co. did ship what the correspondent bought, but owing to his failure to make a thorough examination before buying, it did not turn out as good as he thought.

Any buyer who buys goods after inspection, and who is shipped entirely different and inferior goods, can of course reject them at once, because they are not what he bought. If he has paid for them under the false impression that they *were* what he bought, he can sue to recover his money, and he will get it without doubt if he can make out his case. And more than this, if the seller induces him, or even allows him, to pay a draft under the implied false representation that the goods are what he bought, he, the seller, is guilty of obtaining money under false representation and can be prosecuted criminally.

But suppose the second theory is the correct one here, viz., that the goods shipped were actually what were bought, but upon more careful examination they turned out to be poorer than the buyer thought they were. Does the fact that he bought after being given a chance to examine, and after he actually did examine to a certain extent, prevent him now from rejecting? In other words, does that familiar and much-abused rule, *caveat emptor* (let the buyer beware) apply in this case?

In sales of this sort, where it is hard to get at the greater part of goods which are to be bought, the buyer often relies upon the seller's statement that the part not seen is like or equal to the part seen. If the buyer buys on the strength of that representation, and later finds that the part not seen is not like or equal to the part seen, he can usually call the deal off on either of two grounds: 1, breach of warranty, or, 2, fraud. Here is the law of such cases in a nutshell:

Fraudulent misrepresentations by the seller concerning the quality, character or soundness of the goods are ground for avoiding the contract, provided the circumstances are such that the buyer was entitled to rely on the representations. If the buyer relies on an examination or test made by himself or another, he does not rely on the misrepresentation and cannot depend on them.

Ordinarily when the buyer has equal means of forming his own estimation, representations of quality by the seller are not such as the buyer is entitled to rely on.

In other words, suppose I propose to buy some goods which lie open on a table before me. Nothing is concealed, it is not a case of buying on sample—the whole thing is right there under my eyes. I would not be entitled to rely on any representation by the seller there; I had the fullest opportunity to examine for myself. Here is some more law on this phase of the case, and also on cases where the goods bought are not so easily examined:

Many cases lay down the rule broadly that if the means of knowledge are at hand and equally available to both parties, the buyer will not be heard to say that he has been deceived. On the other hand, there are cases which hold that a person cannot avoid the effect of his fraudulent representations on the ground of the credulity or negligence of the injured party, and that the buyer may rely on a representation of fact, although the means of knowledge are at hand and open to him. All courts agree that if the means of knowledge are not at hand or the buyer has not equal facilities for ascertaining the truth, he may rely on the seller's representations.

This fits a case like the correspondent's exactly. The goods when he examined them were piled up on the floor, part where they could be examined, but the most where they could not be. He approves the part he sees and asks a representative of the seller if the unseen part is just like it. The answer is yes, and he buys. I am clear that if later the statement on which he bought proves to have been false, he can reject the lot and demand the return of his money.

Even if the seller's representative

meant no fraud when he said the unseen part was like the seen, the result is not changed, because a statement like that is considered fraudulent "if made recklessly without knowledge whether it be true or false. And it is generally held that an unqualified statement of a material fact implies a representation of knowledge, and if the representation is false, it is fraudulent."

Under either aspect of this case, if the facts are as the correspondent states them, he has the right to reject the goods, provided he inspected and rejected them within a reasonable time after receipt. He should notify the seller that they are held for the seller's account. He could also accept them and merely sue for the difference in value between them and the goods he bought, but in most cases—especially where the goods haven't been paid for—it is more satisfactory to reject in toto.—(Copyright, September, 1918, by Elton J. Buckley.)

Save and Have, and lend to the Government. Buy W. S. S.

NUCLEIC ACID AND ITS ANALYTICAL EXAMINATION.[1]

By A. Chaston Chapman, F.I.C.

During recent years nucleic acid and certain of the metallic nucleates have found somewhat wide and increasing application in medicine, and particularly in connection with surgical practice. At the outbreak of war, these substances were obtained chiefly from Germany and America, and so far as I am aware were not manufactured at all in this country. A number of urgent inquiries having been received from France and elsewhere, the Pharmaco-Chemical Products Company, Ltd., suggested to me that I should undertake the investigation of this matter with the object of devising methods for the manufacture of pure nucleic acid and its derivatives on a large scale. Yeast was obviously the most convenient raw material, and for more than a year the above-mentioned company has been manufacturing considerable quantities of pure yeast-nucleic acid and its compounds.

It will be obvious that, in the prosecution of this work, it was necessary to have methods for examining the products obtained and to establish analytical *criteria* of purity. The production of pure nucleic acid on a large scale presents many difficulties, the two chief ones being the complete removal of protein and the prevention of the contamination of the acid with the products of its own decomposition. This will be at once apparent when it is remembered that nucleic acid results from the breaking-down of the nucleo-proteins of the cell nuclei on the one hand, and that, on the other, it yields, as the result of further hydrolytic change, a number of complex nucleocides and bases, together with phosphoric acid and the carbohydrate *d*-ribose. The conditions for hydrolysis have therefore to be very exactly determined and very strictly observed in practice.

Up to the present two nucleic acids have been very fully studied, the one derived from yeast, the other from the thymus gland. Whether these two acids represent typical members of two sharply defined groups, or whether all nucleic acids are identical with the one or the other, is at present a little doubtful. The latter view is, however, the one more generally held, and the nucleic acid from yeast is frequently known by the more comprehensive term "plant-nucleic acid." It is with this plant nucleic acid that the present paper chiefly deals.

The following statement shows at a glance the chief products of hydrolysis of these two nucleic acids, and at the same time affords an insight into their respective chemical constitutions:

Plant Origin.—Guanine, adenine, cytosine, uracil. *d*-ribose (pentose), phosphoric acid.

Animal Origin. — Guanine, adenine,

---

[1] From The Analyst, July, 1918.

cytosine, thymine, lævulinic acid (from a hexose), phosphoric acid.

Plant nucleic acid is a white friable substance devoid of odor or taste, and having the formula $C_{38}H_{50}O_{29}N_{15}P_4$. It is practically insoluble in water, but dissolves readily in solutions of alkaline acetates. It is also readily soluble in solutions of the alkalies forming the soluble alkaline salts. From these solutions a few drops of hydrochloric acid precipitate the nucleic acid in a dense curdy form, which dissolves completely on the addition of a large excess of the acid.

When acetic acid is added to a solution of the sodium salt, the acid is partly precipitated, but no precipitate is formed on the addition of any acid in the presence of a sufficient quantity of alkaline acetate.

When added to a solution of sodium nucleate, a solution of copper acetate acidified with acetic acid gives a bulky greenish-blue precipitate.

Calcium chloride in excess in the presence of a few drops of acetic acid gives a white precipitate at first flocculent, quickly becoming more granular.

Silver nitrate, when added in considerable excess to a fairly strong and neutral solution of sodium nucleate, gives a white gelatinous precipitate. On the addition of a little sodium chloride this dissolves, forming an opaque colloidal solution. One drop of hydrochloric acid added to this precipitates the silver as chloride.

Solutions of sodium nucleate in water exhibit a marked tendency to gelatinize, and, if sufficiently strong, set to a jelly.

The above reactions, coupled with the recognition of guanine and adenine (which are the most easily isolated and best defined of the bases formed on hydrolysis), suffice for the identification of nucleic acid, when it exists in a fairly pure condition.

For the hydrolysis of nucleic acid 10 grm. of the acid (or a larger quantity if available) are heated in a boiling water-bath for two hours with 40 Cc. of 10 per cent. sulphuric acid (or a proportionately larger quantity if more than 10 Gm. are taken) in a small flask fitted with an air condenser. At the end of this time strong ammonia is added to the hot solution in the flask until the liquid contains an excess of about 2 per cent. The guanine is precipitated in a granular form, the adenine remaining in solution. After filtering and washing with 1 per cent. ammonia, the guanine is dissolved in the smallest possible quantity of dilute sulphuric acid, decolorized if necessary by means of a little animal charcoal, and the base precipitated again from the colorless solution by the addition of an excess of ammonia. The purified base may then be converted into the hydrochloride, which crystallizes very readily and may be easily identified by the application of any of the well-known tests. The ammoniacal filtrate from the guanine, together with the ammoniacal washings, is acidified with sulphuric acid, heated to boiling, and the adenine precipitated as a cuprous compound by the addition of a 10 per cent. solution of copper sulphate. Inasmuch as the solution contains the carbohydrate ribose, it is not necessary to add sodium bisulphate for the purpose of reducing the cupric compound. The adenine-copper compound is suspended in hot water, decomposed with sulphuretted hydrogen, and the filtrate from the copper sulphide evaporated to dryness on the water-bath. The residue, consisting of nearly pure adenine, is dissolved in 5 per cent. of sulphuric acid, and the adenine sulphate, which is readily soluble in hot, but very slightly soluble in cold water, allowed to crystallize. The usual tests can then be applied.

The following is an outline of the procedure to be adopted for the examination of nucleic acid, with the object of ascertaining its purity and quality:

The acid should be white or at the most have a very faint buff color. It should be completely soluble in an aqueous solution of sodium acetate or in dilute solutions of ammonia or of sodium or potassium hydroxides. The solutions in these reagents should be bright and almost colorless. When a few drops of hydrochloric acid are added to a solution of the sodium salt in water, the acid should be precipitated as a white curdy substance, and on the further addition of a large excess of the hydrochloric acid this should dissolve completely. An aqueous solution of the sodium salt should give with cupric acetate, calcium chloride and silver nitrate the reactions described above.

Tests for the Absence of Protein.

Biuret Reaction.—A solution of the acid in an excess of caustic soda should give, on the addition of one or two drops of dilute copper sulphate solution, a greenish-blue color with at the most a faint tinge of purple. This test is quite sufficient, but occasionally the following test is applied:

A 5 per cent. solution of nucleic acid in a small excess of ammonia, when heated in a bath at 105° C., should give at the most a slight turbidity.

In connection with these tests, it may be pointed out that the removal of the last traces of protein matter from nucleic acid involves a very troublesome series of treatments, and that acid of high commercial quality will usually give an indication of the presence of traces of protein when subjected to the above tests. The second of the above tests is the more severe, inasmuch as an amount of protein equal to not more than 0.1 or 0.2 per cent. (expressed on the acid) gives a very appreciable volume of precipitate.

Inorganic Phosphate.—To a solution of the acid in excess of ammonium or sodium acetate a few drops of acetic acid are added, and then a little uranium acetate. A flocculent precipitate is formed, which in the absence of more than a trace of inorganic phosphate should dissolve completely on boiling. A considerable excess of alkaline acetate is necessary in this test.

Estimation of Nitrogen and Organic Phosphorus.

Nitrogen.—This is estimated by the Kjeldahl method in the ordinary way.

Phosphorus.—A weighed quantity of the acid is fused with six times its weight of sodium carbonate containing 10 per cent. of potassium nitrate. The fused mass is taken up with water, and in this solution the phosphoric acid is estimated either by the molybdate method or by direct precipitation with magnesia mixture in the presence of a little ammonium citrate.

It will be seen that the formula given above corresponds with 16.1 per cent. of nitrogen and 9.5 per cent. of phosphorus.

Commercial nucleic acid of good quality ought to contain not much less than 15 per cent. of nitrogen and 9 per cent. of organic phosphorus (expressed on the moisture-free sample). The examination of nucleic acid should always include these two items, and the ratio of the percentage of organic phosphorus to that of nitrogen is one of the best *criteria* of the purity of the acid, since, if this ratio (1:1.7) is approximately correct, the presence of any appreciable proportion of the products of hydrolysis is excluded.

THE SO-CALLED COLD PROCESS FOR OFFICIAL SOAPS.

By F. M. JORDAN, Pharmacist Agnews State Hospital, Agnew, California.

LINIMENTUM SAPONIS MOLLIS. TINCTURE OF GREEN SOAP.

The official process involves first the manufacture of the soap, which is later dissolved in alcohol and flavored with oil of lavender. The following cold process completes the preparation in one operation and yields a product which in every way meets the official requirements:

Cotton seed oil	279.50 Gm.
Potassium hydroxide	55.90 Gm
Water	292.50 mils.
Oil of lavender	20.00 mils.
Alcohol, a sufficient quantity to make	1,000.00 mils.

Dissolve the potassium hydroxide in 180 milliliters of water, and, while still hot, add the cotton seed oil. Add 180 milliliters of alcohol and stir or agitate the mixture until a clear liquid soap results, which should be in about ten minutes. Allow to stand for one hour, add sufficient alcohol to thoroughly liquefy, about 200 milliliters, and 112.50 milliliters of water. Now add the oil of lavender and sufficient alcohol to make the finished product measure 1,000 milliliters. Allow to stand one week and filter.

Assuming that the writer's figures are correct, each ten milliliters of this tincture contain exactly 6.50 Gm. of official green soap. It is now a simple matter to determine the degree of alkalinity using the method directed by the pharmacopoeia for standardizing green soap. An excess of alkali must be avoided and the preparation of a test batch of, say 100 milliliters, is suggested. An assay of this test batch gives at once the correct proportion of alkali to oil and the same materials may then be used with confidence for batches of any size.

Linimentum Saponis. Soap Liniment

The saponification of olive oil by the cold process is a very simple matter and this fact is perhaps the best argument for the suggested modification of the present official directions. Even a properly and honestly made castile soap, an article by the way which is just now somewhat of a rarity, is by no means easily dissolved in water. The following formula yields a product which in every way meets the official tests for soap liniment:

Olive oil	53 Gm.
Sodium hydroxide	7 Gm.
Camphor	45 Gm.
Oil of rosemary	10 mils.
Alcohol	700 mils.
Water, a sufficient quantity to make	1,000 mils.

To the olive oil, contained in a suitable vessel, preferably of glass, add a solution of the sodium hydroxide in 25 milliliters of water. To this mixture add 25 milliliters of alcohol and agitate the contents of the vessel until saponification is complete and the mass becomes clear, gelatinous and semi-solid. Let stand one hour or longer. Dissolve the camphor and oil of rosemary in 675 milliliters of alcohol, add to the soap just prepared, and, if necessary, add sufficient water to make the finished product measure 1,000 milliliters. Finally mix thoroughly.

MARKET LETTER.

(By F. W. Dessel.)

In most of the pharmaceutical drug lines trading continues to be very light. The majority of pharmacists are buying in small quantities the daily needs of the public. Evidently the majority of pharmacists believe a marked reduction of prices of many lines is near at hand.

The crude drug market is still strong though very uneven. Ergot still remains very firm. With the Russian supply cut off the little we get must come largely from Spain. Gum Opium is still selling around $24 to $25 per pound. We may obtain considerable supply from Turkey in the near future. The essential oils are somewhat stronger and meet with very good demand. Sugar of Milk still maintains a strong price, and probably will continue to do so for some time, because of its importance as a food. Phenol now sells lower than before the war. The coal tar products generally have shown considerable weakness. Saccharin has now declined to about $4 per pound and with little demand at that. Quinine is still quite strong, largely because it has been extensively used in treating influenza patients. Mercury has taken a sharp drop. The metal is now selling around a dollar a pound wholesale. Glycerin has reached a low level of about eight cents per pound for the industrial kind.

"I suppose you never look at a man without wishing him dead, Mr. Undertaker?"

"Well, hardly that. I know some people whom I would be delighted to bury alive."—Stray Stories.

WORK — SPEND — SAVE — Buy W. S. S.

PERSONAL AND DRUG TRADE NEWS

By Our Special Correspondents

E. B. Griffing of Diebert's Drug Store, East Oakland, was recently married to Miss Anita Koenig.

We regret to anounce the death of E. H. Wurster. He was formerly with Benzinger's Pharmacy, Oakland.

The Phone Drug Co. of Fresno was recently sold by the widow of the late Horace G. Parsons to the Langley & Michaels Co. of San Francisco.

G. D. Pratt of San Francisco recently purchased the pharmacy of J. C. Walton of Wheatland.

Gus O. Clotz of Vallejo recently died, the cause being apoplexy. For many years he was proprietor of the Vallejo Drug Co., Vallejo.

The Hagemann Brewing Co., Eighth and Harrison Streets, San Francisco, has leased its building and machinery to the Riesner Chocolate Co. for a period of five years. The chocolate company has the option of buying the building.

Cocoanut oil is being shipped directly from the Philippine Islands to Europe. The need for fats in the central empires is so great that there should be a wonderful opportunity for disposing of surplus stock of this oil.

The reason that some men accomplish more than others, they attempt.

Don't forget that you are to register and pay the narcotic tax by April 25th.

Assembly bill 622 pertaining to pharmacy and membership on State Board of Pharmacy died in the committee.

B. C. Ainsley, representative of the American Drug Fire Insurance Co., recently paid San Francisco a visit. Mr. Ainsley resides in Pasadena, although he retains an office in the Hearst Building, San Francisco.

The San Francisco Retail Druggists Association held a meeting at Hale's Pompeian Court.

Representatives of the State Board of Pharmacy and State Board of Health have been recently making some big hauls among the drug fiends and crooks.

The Sunday closing law bill died in the committee.

H. C. Reck, well known member of the wholesale drug firm, Coffin-Redington Co., is making his annual business trip East at the present time.

Geo. W. Hays of Spokane is managing the Crescent Drug Store, Pasco, Washington.

Mr. R. L. Deer, who has managed the Chicago Branch of the H. K. Mulford Company for the past twenty-five years, has been promoted to the position of Supervisor of Branches of the H. K. Mulford Company and will leave Chicago shortly for the Home Office of the Company at Philadelphia, where he will assume charge of his new duties. Chicago Branch salesmen gave a farewell dinner to Mr. Deer on Saturday, March 22nd, Mr. A. T. Rickards, assistant treasurer of the H. K. Mulford Company, presiding.

Spend wisely, save sanely, invest safely. Buy W. S. S.

DRUG STORE for sale. Sacramento, Cal. Handsome fixtures, stock bottles, and a full line for starting new drug business, practically complete, except patents and sundries. Will sell at a bargain. Owner has embarked in wholesale drug business. Address Pacific Pharmacist.

James J. Spellman, ex-U. C. '18, is still in the service but expects his release in August, when he will return to complete his course in U. C. College of Pharmacy. His address at present is: Care U. S. S. Northern Pacific, New York.

Clyde L. Eddy, U. C. '12, formerly one of the editors of the Druggists Circular, has just returned from France. Mr. Eddy was attached to the Signal Corps as news photographer. He enlisted June, 1918, and went over with the 39th Division. He reached Paris in September and witnessed a German air raid over the capital. He was attached to the photographic air service. During October and November he covered the entire Toul sector from Verdun to Nancy, making photographic history of the air service. It will be remembered that Mr. Eddy was one time editor of THE PACIFIC PHARMACIST. He writes that he is glad to be back though he had a very interesting service.

FOUNTAIN BUSINESS BOOMING.

Langley & Michaels Co., the Coast agents for the Walrus Mfg. Co., report a lively inquiry for Soda Fountains. Among recent sales made may be mentioned:

DuBose & Kilborn, Dunsmuir; E. B. Thompson, Cloverdale; Livingston Drug Co., Livingston; Guy Hansard, Merced; Lemon Cove Mercantile Co., Lemon Cove; Lawrence Austin, San Luis Obispo; The Brunswick, Hanford; W. S. Coleman, Albany; A. Brunner, Richmond.

FEWER FIVE AND TEN CENT SALES.

The Bayer Company very frankly is telling the trade that it is spending a million dollars in continuous advertising to take Aspirin out of the five and ten cent class and make "Bayer Tablets of Aspirin" a source of real worthwhile profit.

The Bayer people make the point that druggists who count their time as worth something, are interested in the declaration of Printers' Ink that most five cent drug sales entail loss rather than profit.

Since American push, pluck, and dollars have gone into "Bayer Tablets of Aspirin" it is the fixed policy of the new All-American Company to maintain the confidence which millions have placed in the "Bayer Cross." Therefore the 110,000,000 American people are told to buy "Bayer Tablets of Aspirin" in the original "Bayer Package" marked with the "Bayer Cross" rather than accept loose tablets in pill boxes.

The appeal helps the druggist because it sends customers to him prepared to pay the price for the "Bayer Package." The druggist who stocks heavily with "Bayer Tablets of Aspirin" takes no risk. He has a sure thing. If the million dollars' worth of advertising doesn't sell the goods he can return them and get his money back.

TO ALL NARCOTIC SPECIAL TAX-PAYERS REQUIRED TO AFFIX STAMPS:

In accordance with a telegram from Daniel C. Roper, Commissioner of Internal Revenue, Washington, D. C., to Justus S. Wardell, Collector of Interal Revenue, Washington, March 20, 1919, you should affix to each broken or unbroken individual bottle or other container of unstamped Narcotic drugs and preparations your own label or paster with the words "In stock inventory of February 25th, 1919" and your initials, in order to avoid possible seizure.

This notice does not apply to importers, manufacturers, producers, compounders or to dealers in untaxed Narcotic preparations, that is, to persons paying $24 per annum, or to persons who pay $1 per annum (new tax rate).

Other information in the matter of

Recommend

GOAT MILK

For Malnutrition of Infants and for Invalids. Invaluable in Tubercular cases. Do this and your customers will become your friends.

WIDEMANN'S GOAT MILK

11 oz. can
Retails 25c

We can assist in building up a good business.

Send for our Sales Helps

Widemann Goat Milk Laboratories

Physicians Bldg. San Francisco

the new Narcotic Tax will be sent out as soon as received from the Commissioner of Internal Revenue.

Respectfully,
JUSTUS S. WARDELL,
Collector of Internal Revenue.

FEATURING GOGGLES IN THE WINDOW.

Another window trim that recently attracted a considerable amount of attention was one devoted exclusively to the display of goggles. It showed the various stages in the manufacture of a pair of goggles, from the block of glass from which the lenses were made, to the final adjustment of the rims, each step of the process being interestingly described by means of small showcards. In the rear of the window were shown enlarged fac-similes of letters received from aviators and soldiers at the front, telling how beneficial they had found the brand of goggles on display. By using ingenuity in hitching this product up to a war atmosphere, the store succeeded in running the goggle sales for the week of the display far beyond that of any other week in the records of the business, says *The Druggist Circular*.

A little thought will undoubtedly suggest to the reader various other ways of featuring, by means of an attention-compelling, sales-making window trim, some of the many products on his shelves.

The war created a wonderful opportunity for the planning of interesting window displays, and it is an opportunity that the wide-awake druggist will be quick to seize. Every one is interested in war relics and will stop to look at a trim that tells some interesting fact regarding any one of them.

STATEMENT

of the ownership, management, circulation, etc., required by the act of Congress of August 24, 1912, of The Pacific Pharmacist, published monthly at San Francisco, California, for April 1, 1919.

State of California,
City and County of San Francisco, ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared H. B. Carey, who, having been duly sworn according to law, deposes and says that he is the publisher of the Pacific Pharmacist, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, H. B. Carey, 1294 9th Ave., San Francisco.

Editors, H. B. Carey, 1294 9th Ave.; F. W. Dessel, 1298 9th Ave.; I. H. Dawson, 500 Devisadero St., San Francisco.

Managing Editor, H. B. Carey, 1294 9th Ave.

Business Managers, none.

2. That the owners are: H. B. Carey, 1294 9th Ave., San Francisco.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

H. B. CAREY,
Editor, Publisher, Owner.

Sworn to and subscribed before me this 1st day of April, 1919.

(SEAL.) R. M. BROWN,
Notary Public in and for the City and County of San Francisco, State of California.
(My commission expires Oct. 18th, 1921.)

THE

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THE VALUE OF THE MICROSCOPE IN THE DRUG STORE.*

By Heber W. Youngken, Ph.G., Ph.D.

The object of this paper is to point out the advantages of the microscope as applied to the needs of the average retail pharmacist.

The writer in his frequent visits to various drug stores, has been astonished at the comparatively small number possessing microscopes, especially in view of the fact that the pharmacognostic standards for many U. S. P. and N. F. drugs are very exacting. This condition is not without a reason. He has therefore inquired of students and pharmacists why the microscope is not made use of in determining the purity of the various crude, granulated and powdered drugs and spices handled. Several have essayed it to be something non-essential because they deal with reputable houses. Others have admitted it to be of value but claim the time required to examine drugs microscopically would be out of proportion to the profits accrued.

I am well aware that all thinking business men measure their time in terms of dollars and cents and so, if they can be shown a way to make the dollars, they will surely grasp it.

Two of the telling points in business are confidence and service. There must be confidence on the part of the purchaser that the article for sale is worth what is asked for it and, moreover, that it is exactly what is asked for. A dissatisfied customer will seldom return. To secure the confidence of one's customers is more essential in the pursuit of pharmacy than practically any other line of business enterprise. The very fact that the public is aware of the poisonous nature of a number of drugs makes it alert to view any mistake made by the pharmacist as an act of gross incompetence. Quite frequently, minor errors on the part of pharmacists have been seized upon and magnified to others with a resultant dimunition of their confidence and a consequent loss of considerable trade.

Just recently I was shown a sample of sweet marjoram purchased in a one-ounce carton from a local druggist by one of my neighbors. The neighbor contended that it was "rubbish." When I examined it, I found that the drug was not only ancient but admixed with hair, dirt, foreign stems and a foreign leaf. Subsequent microscopical examination showed the foreign leaf to be that of Coriaria myrtifolia, a poisonous species, which no doubt was collected with the marjoram. Had this particular druggist purchased his stock of sweet marjoram in bulk and examined it microscopically, he would have saved this customer, for despite all the excuses I could manufacture to protect the druggist; the party vowed he would never go back to that store for anything.

This is but one example of a crude drug adulterated. Numerous others have, and still are being adulterated. Some of the most common might be cited as poke in belladonna, wafer ash bark in euonymus, ruellia in spigelia, fagot cinnamon in saigon cinnamon, European rhubarb in Chinese rhubarb, safflower in saffron, etc., etc.

Many instances can be given showing the value of the microscope in the

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* Read at the annual meeting of the Pennsylvania Pharmaceutical Association, Wilkes Barre, Pa., June, 1918.

FOR SALE—Live wire Rexall Drug Store. In a class by itself as a money maker. Will stand the most grilling investigation. Sales last year over $21,000. Can be greatly increased with proper attention. Requires about $10,000 cash to handle. Owners have other business. If interested write box 86 Portola, Cal.

THOROUGHLY Experienced saleslady desires a position with a drug firm. Best of references. M. S., 502 Clayton st., City.

Notify Your Clerks!

"Bayer" Advertising Will End Unprofitable Five and Ten Cent Aspirin Sales

Don't Sell Aspirin in Pill Boxes! Sell "Bayer Tablets of Aspirin" always in the "Bayer Package" and Make Big Profits!

ONE million dollars is being spent in compelling, red blooded advertising to send customers to you prepared to pay the price for unbroken packages of

Bayer-Tablets of Aspirin

You will strengthen your claim to their confidence and make greater profits for yourself by selling them the "Bayer Packages" marked with the "Bayer Cross."

Your Customers Know the "Bayer Cross" Means Genuine

Increase Your Stock at Once! Sale is Absolutely Guaranteed!
You Can't Lose! Send for a Window Display in Colors!

THE BAYER COMPANY, Inc.
117 HUDSON STREET, NEW YORK

The trade-mark "Aspirin" is a guarantee that the monoaceticacidester of salicylicacid in these tablets is of the reliable Bayer manufacture

examination of powdered drugs and spices and the detection of adulteration. For instance, the presence of saw-dust in white pine bark, powdered mullein and elecampane leaves in powdered digitalis, wheat middlings in ground ginger, powdered bombay mace in mace, the endocarp of the olive in ground black pepper, etc.

Not long ago one of my students took occasion to examine some fine-grain acetyl-salicylic acid tablets microscopically, which had been purchased by his preceptor at a figure slightly below that of market quotation. He was surprised to find in these considerable corn starch. A quantitative analysis later made by his preceptor showed that the five-grain tablets were composed of three grains of acid acetyl-salicylic and two grains of corn starch. This is but one of the numerous cases that might be cited to show the value of the microscope in determining the purity of chemicals.

Much of what I have thus far shown bears upon the value of the microscope in determining the authenticity of the article. Let us now turn to the money side of the question. This naturally has a strong bearing upon the quality of drugs sold.

Some of our more scrupulous brethren in pharmacy are modestly and quietly examining samples of the drugs they handle and no doubt reaping their reward by the reputation they have gained for handling and dispensing effective medicaments. But how much greater might be the returns, if they were to advertise the fact alike to the laity, and to the medical profession.

This could be accomplished through the medium of the press, by having cards posted in conspicious places about the store, announcing the fact that all drugs entering the store were examined carefully before being dispensed and by placing the microscope in the show window when not in use, accompanied by a neatly printed card explaining the use made of the instrument in passing upon the drugs handled. This form of advertising would soon attract considerable attention and aid in giving the drug store that professional appearance which I regret to state many of the so-called modern drug stores sadly lack.

When the care exercised in selecting and handling drugs and spices becomes generally known to the public, I venture to say that the pharmacist's trade would be greatly augmented. He would further be able to charge and obtain more for his medicines on the basis of professional services rendered.

Finally, the microscope is a valuable asset because its use protects the druggist from incrimination. The Pure Food and Drug Acts of the National and State Governments make it incumbent upon all dealers in drugs and chemicals to sell and dispense only such U. S. P. and N. F. drugs which conform to the standards of the U. S. P. IX and N. F. IV. The Federal and State inspectors may drop in at any time and generally the least expected one.

The mere labeling of a package of ground, powdered or crude drug by the wholesaler, as conforming to the Drug Act does not save the pharmacist from prosecution in case of adulteration, once the package or carton has been opened by him. For an unscrupulous wholesaler could claim that the contents were tampered with by the retailer.

Many will doubtless say, "We can protect ourselves by only handling drugs in cartons sealed and lobeled by the wholesaler." Unfortunately for such, that cannot be done in every case of a drug called for, as verified by practical experience.

The druggist not examining his drugs, therefore, makes himself subject to prosecution at any time he sells or dispenses a misbranded article.

It can readily be conjectured

P-W-R

CODEINE

MORPHINE
Sulphate and Hydrobromide
DIACETYLMORPHINE
Alkaloid and Hydrochloride
ETHYLMORPHINE HYDROCHLORIDE

POWERS-WEIGHTMAN-ROSENGARTEN CO.
FOUNDED 1818
Manufacturing Chemists
New York PHILADELPHIA St. Louis

through the sad experience of others what effect such prosecution would have upon the reputation of the store and confidence of its customers. Once these have been lost the druggist might as well prepare to move.

I know of no other start to bring pharmacy back to its own than to practice it as it should be practised. Anything worth doing is worth doing well, and he who does it well is duly rewarded, not only in dollars, but in that state of mind which one of our philosophers states to be the main purpose of life, namely, happiness.—Amer. Journ. of Pharm.

MERCENARY MEDICO.

Secretary McAdoo, apropos of the free anti-typhoid treatment, said at a Washington luncheon:

"I once heard of a fashionable but mercenary surgeon who was asked by a friend:

"'What did you operate on old Laydup for?'

"'For $5,000,' the surgeon answered.

"'No, no,' said his friend. 'I don't mean that. I mean what did he have?'

"'He had $2,500,' said the surgeon."

Be a personal partner of Uncle Sam. Buy W. S. S.

Sambo: "Ah loves you, Mandy, an' ah jest come to ask yo' to fix up de weddin.'"

Mandy: "What's de mattah? Has yo' lost yo' job?"

Wu Ting Fang is at the head of the Chinese Foreign Office and you can't put much over on a man with as good a sense of humor as Dr. Wu. T. K. H. recalls his famous wheeze about the Chinaman who committed suicide by eating gold-leaf. "But I don't see how that killed him—how did it?" inquired an American woman. "I suppose," said Wu, seriously, "that it was the consciousness of inward gilt!"

FORMULAS

PETROLATUM EMULSION.

While the internal administration of the hydrocarbon oils, either in the liquor or semi-solid form, may not be regarded in the light of a new discovery, its value as a substitute for some of the fatty oils in the treatment of diseases of the throat and lungs is well known.

1. Soft petrolatum	grams	40
Mineral oil (white)	grams	200
Powd. acacia	grams	60
Syrup	mils	50
Jamaica rum	mils	50
Water, to make	mils	500

2. Liquid petrolatum, heavy	ounces	5
Powdered acacia	ounces	2½
Powdered tragacanth	drachms	2
Syrup	ounces	2
Water, to make	pint	1

Flavor with oil of anise, cinnamon or peppermint.

Mix the first three ingredients in a mortar, add 4 fluid ounces of water and triturate, until the emulsion is well formed. Then add the flavor, the syrup and finally the balance of the water. Saccharin may be substituted for the sugar provided its presence is plainly stated on the label.

Aromatic Cod Liver Oil.

To produce this, in making emulsion of cod liver oil use 1,000 parts of the oil to about 33 parts of aromatic spirit made according to the following formula:

Oil of bitter almond, without hydrocyanic acid	grammes	2.5
Oil of gaultheria	grammes	2.5
Oil of cinnamon	grammes	2.5
Saccharin	grammes	20.0
Vanillin	gramme	0.4
Dried sodium carbonate	gramme	0.3
Alcohol	grammes	330.0

Mix the saccharin with the sodium salt; dissolve in the alcohol, add the vanillin and the oils, and make a solution.

The Standard Formulary says that cod liver oil may be made palatable by adding to a pint 2 or 3 drams of 1-in-10 solution of saccharin, in acetic ether. Volatile oils, such as peppermint, cinnamon, wintergreen, etc., may also be added.

Pavesi's formula is:

Cod liver oil	fluid ounces	16
Roasted coffee, powdered	av. ounce	¾
Animal charcoal	ounce	½

Place in a well-closed flask, digest on a water-bath for one hour, then set aside for three days, and filter.

Castor Oil Soda Fizz.

Sodium bicarbonate	grains	10
Powdered citric acid	grains	5
Peppermint water	drams	6
Castor oil	ounce	½ to 1
Syrup of sarsaparilla	ounces	4

The bicarbonate is dissolved in the peppermint water, and the castor oil is added, followed by the syrup, without stirring. The powdered citric acid is then sprinkled over the surface of the mixture. The whole is then vigorously stirred by inserting a teaspoon (a spoon is better than a glass rod) to the bottom of the glass and bringing up the bicarbonate solution to be acted upon by the acid. In a few seconds a remarkably thick foam is produced.

Two, or at the utmost, three, minutes is the time it takes to have the mixture in the customer's hands.

I use a peppermint water stronger than the official, prepared for use in this mixture. But plain water may be employed with a dash or two of peppermint spirit. This, however, will compel the operator to make use of an additional bottle, and when in a hurry any unnecessary movement is to be avoided.

In previous years I had alkaline and acid solutions ready for use, but found that, first, this did not materially shorten the time—two bottles had to be handled just the same—and second unless calls for castor oil mixture were brisk, the solution spoiled; the alkaline solution by gradually losing carbon dioxide, and the acid solution by decomposing and becoming covered with a kind of a moldy pellicle. Boiling, though, preserves it longer.

Syrupus Eriodictyi.
Syrup of Yerba Santa.

Fluid Extract Yerba Santa	mils 30
Potassium Carbonate	grams 6
Water	mils 15
Syrup, sufficient to make	mils 500

Mix the alkaline solution with the fluid extract and add the syrup.

In some localities this syrup is extensively used in bronchial coughs.

Lung Balsam.

Linseed	ozs. 2
Liquorice Extract	ozs. 4
Anise Oil	drs. 2
Squill Oxymel	pts. 6
Tolu Syrup	pts. 2
Capsicum Tincture	ozs. 1
Treacle	pts. 6
Distilled Water	pts. 4

Modified Dobell's Solution.

Sodium borate	grams	15
Sodium bicarbonate	grams	15
Sodium benzoate	gram	0.50
Sodium salicylate	gram	0.50
Eucalyptol	mil	0.30
Thymol	gram	0.30
Menthol	gram	0.15
Menthyl salicylate	mil	0.20
Glycerin	mils	125
Alcohol	mils	30
Distilled water	mils	4000

This is the formula used in the German Hospital, Philadelphia, which was printed in the Pharmaceutical Formulas of the American Pharmaceutical Association.

Menthol Snuff For Colds.

The following formula is given in *Dietrich's Manual*:

Boric acid	parts 30
Orris root	parts 7
Roasted coffee	parts 30
Sugar	parts 10
Menthol	parts 3

Reduce the solid ingredients to the finest powder, mix and then work in the menthol.

Children's Hospital Cough Mixture.
German Hospital, Phila.

Aromatic Spirit of Ammonia	mils	2.5
Syrup of Senega	mils	6
Syrup of Ipecac	mils	6
Syrup of Tolu	mils	6
Camphorated Tinc. of Opium	mils	1.5
Comp. Tinc. of Cardamom	mils	4
Syrup	mils	35
Anise water, sufficient to make	mils	100

Antiseptic Throat Spray.

Oil of eucalyptus	mins. 40
Thymol	grs. 10
Menthol	grs. 50
Methyl salicylate	mins. 15
Boric acid	grs. 15
Glycerite of tannin	drs. 6
Alcohol, 80 per cent.	fl. ozs. 4

Fig Syrup Compound With Cascara.

Oil Peppermint	dram 1
Figs, cut and bruised	ozs. 8
Fld. Ext. Nutmeg	dram 1
Fld. Ext. Cascara Arom.	pints 4
Fld. Ext. Cloves	drams 2
Fld. Ext. Cassia	drams 2
Gran. Sugar	lbs. 5
Water, qs.	gallon 1

The figs should be boiled in a double boiler for about two hours with about two pints of water. Water should be added from time to time to make up for any evaporated. Then rub through a sieve. To this add all the rest except the oil and sugar. Add some powdered rotten stone and filter through paper into a one-gallon bottle, containing the granulated sugar to which the oil has been added. Then effect solution by agitation.—*Stirring Rod.*

Solution of Magnesium Hypochlorite.

The following solution is said to be very stable, much more so than Labarraque's or Dakin's solution. It retains its antiseptic properties for a long time, and when in contact with wounds the chlorine is liberated gradually. For use it would preferably be warmed to 95 degrees F.:

Chlorinated Lime	Gm.	28
Magnesium Sulphate	Gm.	18.2
Water	Gm.	1000

The two salts are triturated in a mortar, and the water added gradually. The solution is then filtered or decanted. —*Jour. Med. et de Chir. Prat.*

Acid Aperient Mixture.

Magnesii Sulphate	ozs. 3
Acid. Sulph. Dil.	drs. 3
Syrup, Aurantii	ozs. 1½
Aq. Menth. Pip. ad.	Oj.

A dessertspoonful or a tablespoonful with water twice or thrice daily.

Wilson Sundae.

Put two No. 16 cones of ice cream in an oblong sundae dish. One coffee, one chocolate. Over the coffee pour a ladle chocolate satisfaction dressing. Over the chocolate pour a ladle of Marron dressing. Top each with whipped cream and a chocolate drop.

Bowen & Preston are the new owners of the pharmacy at Downey, Calif. They purchased the pharmacy formerly conducted by L. L. Stevenson.

CLASSIFIED.

This Department is free to Druggists, Drug Clerks, Doctors, Dentists, Chemists, Veterinarians and Nurses. Make your wants known and we will do our best to see that you get results.

EXCHANGE—For a good paying Drug Store in a prosperous town, anywhere in California, country preferred, 50 by 140 ft. lot, in fine residential district of San Diego, or 160 acre ranch, uncultivated, with plenty of water, six miles west of Ramona. If interested, write to: W. F. Belcourt, Druggist, Angels Camp, Cal.

WANTED—To hear from owner of good drug store for sale. Send price and full particulars to D. F. Bush, Minneapolis, Minn.

SPECIAL ATTENTION—If you want to sell your drug store, or buy one in any State, or want any kind of position, or need any kind of an employee, or need a Doctor, Dentist or Veterinarian, write F. V. Kniest, R. P., Bee Bldg., Omaha, Nebr. Estab. 1904.

The F. A. Weck Drug Store Exchange, 501 Third avenue, San Francisco, submits the following:

DRUG STORE in one of the largest and richest mining towns in Arizona; doing a good business, about $90 per day. Price, $12,500 or inventory. Would accept half cash and terms for balance. For particulars apply to F. A. Weck Drug Store Exchange.

DRUG STORE in Yolo County in good town, doing good cash business; low rent. Owner purposing to practice medicine. Price, $5,500, or inventory. Apply to F. A. Weck Drug Store Exchange.

DRUG STORE in thriving Oregon town, doing a good business. Owner about to retire on account of advanced age. Value of stock and fixtures, $7,700, or inventory; would consider part cash and term payment for balance. F. A. Weck Drug Store Exchange.

DRUG STORE in Kern County. Only drug store in town; doing a good cash business. Stock and fixtures valued at $5,500. Would consider part cash and terms or some trade. F. A. Weck Drug Store Exchange.

DRUG STORE in Butte County, well established and doing good business, and very low expense. Full particulars to interested parties. F. A. Weck.

DRUG STORE in San Francisco in thickly residence district. Owner has outside business, reason for selling. Daily sales, $22.50; rent, $32.50. Price $3750. F. A. Weck, 501 3rd Ave., San Francisco, Cal.

NEVADA COUNTY. Store doing large prescription business. Rexall and Eastman's agency. Good all the year business; summer and winter resorts. Price, $5,500.

DRUG STORE for sale, San Jose, $3000. Good location, clean stock, good business and small expenses.

SMALL DRUG STORE in San Jose doing fair business and improving. Owner in ill health and must retire. Stock and fixtures valued at $1600.

DRUG STORE for sale, Sacramento, $8000. Money-making business, well established and good location. Good opportunity for a live man with sufficient capital.

DRUG STORE for sale in Santa Cruz Co., $2000. Old established drug store in one of the best towns in California. Good opportunity for active man. Owner wants to retire on account of old age.

LOCATION for a drug store in a thriving town, near San Francisco, located on the main street in a modern new brick building. Low rent and a lease can be obtained if desired. This is an exceptional opportunity for a live druggist wanting to open a new store or to move from some other location.

DRUG STORE, Eureka, Cal. In the center of the city; modern fixtures; doing good business; owner has other interests. Eureka is a fast-growing city of 2000 population; good business the whole year. Price, $7,000.

DRUG STORE in Oregon town (county seat). Owner must sell on account of ill health. Will sacrifice stock, $3500. This is an exceptional opportunity for an active man—only drug store in town, also fine residence at $4000 optional, may consider clear real estate exchange.

DRUG STORE in San Jose, Cal. Clean stock, modern fixtures. Owner will sell at discount from inventory as other business requires his attention.

DRUG STORE in Sacramento County, good town; owner wants to retire on account of old age. Good opening for doctor-druggist. $2500.

DRUG STORE for sale, San Francisco, $4000. On prominent business corner, Richmond District; modern fixtures, clean stock, doing good business; owner wanting to leave State is the only reason for offering store for sale. This is an exceptionally good offer for any live druggist.

FOR SALE—Drug store at Larkspur, Marin County, for sale owing to death of owner, and widow must sell. Larkspur and vicinity has about five hundred population and good country trade. A popular summer resort. A splendid chance for a druggist or doctor druggist to build up a prosperous business. Modern fixtures and stock valued at $2500; the store has been established about three years. Rent of store and six-room flat $30 per month. The store will be sold at a sacrifice. If interested call on F. A. Weck, 501 3rd Ave., San Francisco, Cal. Make appointment to see the store. Any reasonable offer will be considered.

DRUG STORE WANTED—We have a client wanting to buy a good drug business in one of the bay towns. Business must be on a good paying basis, sufficient to satisfy the employment of a registered pharmacist and a boy. Good location, clean stock and modern fixtures. State particulars. Address, F. A. Weck, 501 3rd Ave., San Francisco, Cal.

FOR SALE—Drug store in San Luis Obispo county, in prosperous dairy section, thirty-five miles from nearest drug store. Population, 300; large country trade; clean stock and modern fixtures; daily sales, $17 to $18; rent, $8 per month; price, $2000. Get particulars from F. A. Weck, 501 3rd Ave., San Francisco, Cal.

FOR SALE—Drug store Solano county; sixty miles from San Francisco; doing good cash business and a large prescription file; A. D. S. and other agencies; new stock and fixtures; price, $5000. For particulars address, F. A. Weck, 501 3rd Ave., San Francisco, Cal.

FOR SALE—Drug store in a rich mining town in California. Managing owner called to war. This is one of the finest equipped drug stores in the State. Stock and fixtures valued at $8000 to $10,000 but is offered for $5000. Inventory of stock and description of fixtures and other particulars may be had by applying to F. A. Weck, 501 3rd Ave., San Francisco, Cal.

DRUG STORE, Angels Camp, one of the best equipped drug stores in the State. This drug store is offered at a bargain in part or as a whole. Stock or fixtures may be bought separately. Anyone contemplating opening a drug store would find it an advantage to investigate this offer. The fixtures are in sections and could be easily packed and shipped to any other location at very much less than new and cheap fixtures could be installed at. If interested, communicate with F. A. Weck, 501 3rd Ave., San Francisco, Cal.

DRUG STORE—One of the best in the city of Fresno is offered for sale on account of the draft. Stock and fixtures about $9000, will make some discount on inventory of stock. Modern fixtures; clean stock; A. D. S. agency. For particulars apply, F. A. Weck, 501 3rd Ave., San Francisco, Cal.

FOR SALE—Drug store in Oakland residence district doing $25 to $30 per day. Owner expects to enter the Medical Department of the U. S. Army. Will sell at inventory, about $2500; stock and fixtures new; established about one year. For particulars address, F. A. Weck, 501 3rd Ave., San Francisco, Cal.

DRUG STORE out of San Francisco. Invoice price about $4000; daily sales, $25 to $30; good agencies and growing business. For particulars see F. A. Weck, 501 3rd Ave., San Francisco, Cal.

If interested in the above list of business opportunities, address F. A. Weck Drug Store Exchange, 501 Third avenue, San Francisco, Cal.

RECENT DISCOVERIES.

Research chemists in the laboratories of the Chicago packing companies have discovered a way to make surgical ligatures which will dissolve in the flesh at the end of a definite period. They are "timed" for ten, twenty or thirty days, and the surgeon needs but exercise his judgment as to when the wound will heal and then select the ligature accordingly.

Another discovery, thromboplatin, is a blood coagulator obtained from the brain of kosher-killed cattle. This material already has been exported to France and used there to hasten the coagulation of blood in soldiers' wounds.

A new curdling agent, rennasse, can now be made from the stomach of the hog. The scarcity of rennet, obtained from the calf's stomach, can no longer cripple the cheese industry, in spite of shortage in imports from Denmark. —Canadian Journal of Pharmacy.

BARGAINS.

DRUG STORE in Yolo County in rich fruit growing country; in live business town. Store doing over $20,000 a year. Owner wants to enter another line of business and will sell at a bargain—inventory or lump sum of $6500. If interested communicate with F. A. Weck, Drug Store Exchange, 501 3rd Ave., San Francisco, Calif.

DRUG STORE in City of San Francisco in thickly settled residence and apartment section. Store doing a large cash business; stock and fixtures up to date. Interested parties will be granted ample opportunity to investigate. Price $12,000. F. A. Weck, Drug Store Exchange.

DRUG STORE, located in the heart of San Francisco, doing a large business. Owners have other business, are offering to sell at a sacrifice. Price $15,000. Full particulars on application. F. A. Weck, Drug Store Exchange, 501 3rd Ave., San Francisco, Calif.

DRUG STORE, in Siskiyou County, in a good thriving town of 800 to 1000 population, on the S. P. R. R. A popular summer resort and the only Drug Store in town, doing a cash business of $30.00 per day, which could be increased. Owner is a jeweler and not a druggist, therefore wants to sell the drug store. Stock and fixtures price $3000; rent only $35.00. If you are looking for a good proposition don't miss this. Apply to F. A. Weck, Drug Store Exchange, 501 3rd Ave., San Francisco, Calif.

DRUG STORE in Santa Clara Valley town of 2500 population, rich fruit growing and manufacturing section; two canneries, iron works and other manufacturing plants. This store has been established for eight years and doing a good cash business. This is an exceptional opportunity for an active man to do a big cash business. Full particulars and reason for selling on application. It will take only $5000 cash. See us at once. F. A. Weck, Drug Store Exchange, 501 3rd Ave., San Francisco, Calif.

DRUG STORE in thickly settled residence and apartment house district, San Francisco, Calif.

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Increased Business Demands
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SODA FOUNTAIN
IS THE
"Practical"
White Soda Fountain

It has behind it the experience gained in the successful production of thousands of Walrus Soda Fountains which have preceded it.

White? Yes—white as snow. With the parts where the wear and the hard knocks come protected with beautifully formed nickel silver.

The Cabinet covers slide out of sight, and out of the way, in underneath the syrup jars, eliminating the inconvenience of the ordinary lift-off or hinged covers.

There are many other superior and exclusive features embodied in this new and wonderful type of Soda Fountain.

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Quality Unsurpassed
DECATUR, ILLINOIS

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Four Business Builders

Bulgarian Bacillus Tablets

For travelers and office workers these tablets containing cultures of the true Bulgarian Bacillus are most convenient.

The Mulford Biological Laboratories are specially equipped to supply true, pure, living cultures of the Bulgarian Lactic Acid Bacillus, and a special method has been developed for incorporating the living cultures in palatable tablets which disintegrate rapidly in the alimentary canal.

Supplied in vials of 50 tablets to retail at 75 cents.

Throat Antiseptic Tablets

Aid in preventing mouth infection. Excellent for correcting bad breath, relieving sore throat or hoarseness due to irritation from smoking or other causes. A convenient throat tablet for the public speaker or singer. More convenient and pleasant than liquid gargles and antiseptics.

The antiseptic action of these tablets is due to the generation of formaldehyde which occurs when the tablet is dissolved in the mouth.

Supplied in vials of 25 tablets to retail at 25 cents.

Anti-Pyor

Dentists are recommending this efficient mouth wash, containing ipecac, for the prevention and treatment of pyorrhea. No branch of hygiene is receiving greater publicity than mouth hygiene. Dentists will expect you to supply Anti-Pyor on their specification and Anti-Pyor is a "repeater."

Supplied in 4-oz. bottles to retail at 50 cents.

Sulphur and Cream of Tartar Lozenges

The Mulford Sulphur and Cream of Tartar Lozenges have earned the designation "The Smooth Lozenge with the Smooth Flavor." They are round and smooth and possess a pleasing flavor which makes the one-time customer come back for more. And, in addition, the Mulford guarantee of identity, purity and strength is back of every lozenge. Don't miss the big business on this lozenge. Stock up now.

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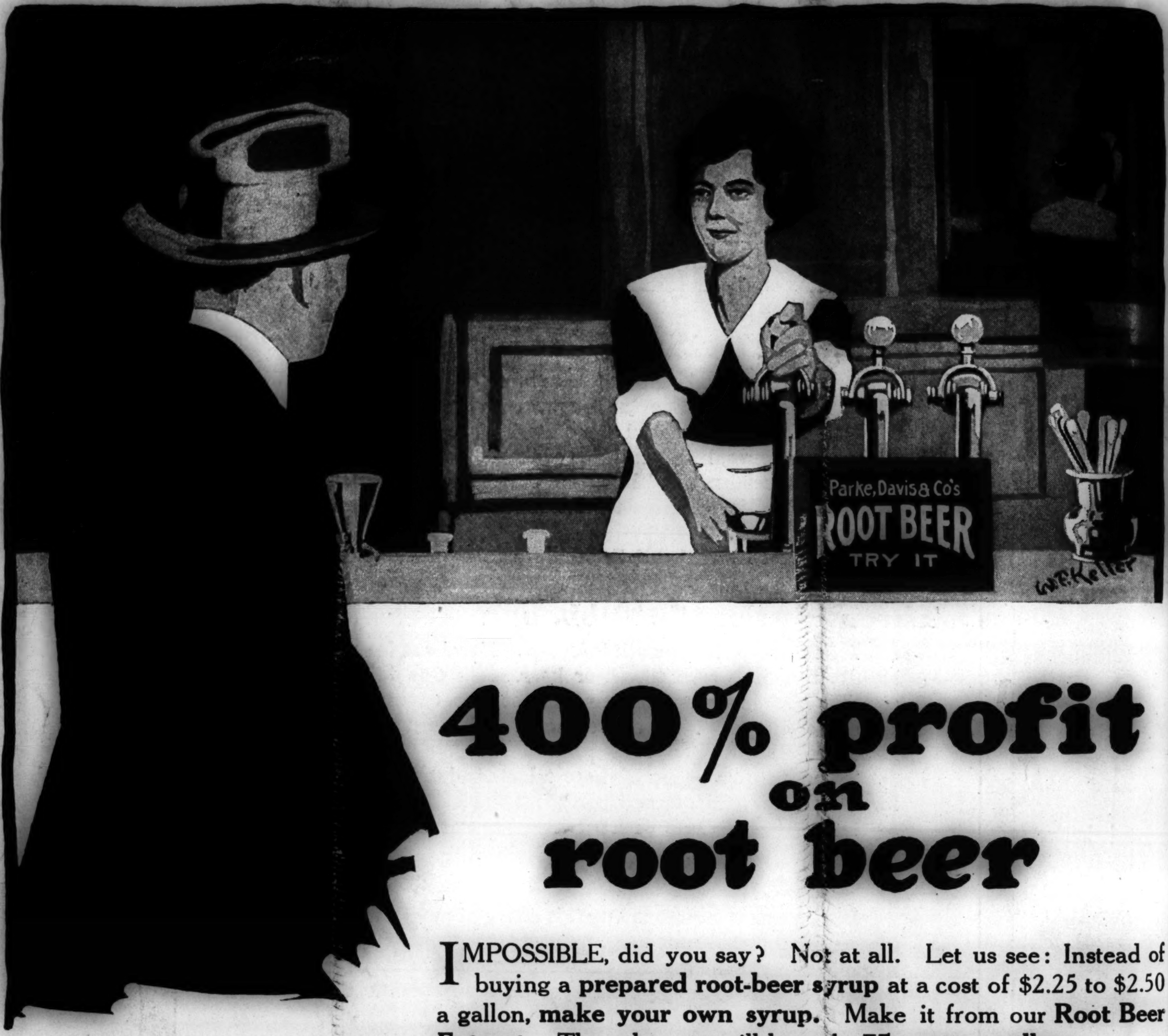

400% profit on root beer

IMPOSSIBLE, did you say? Not at all. Let us see: Instead of buying a **prepared root-beer syrup** at a cost of $2.25 to $2.50 a gallon, **make your own syrup.** Make it from our **Root Beer Extract.** Then the cost will be only **75 cents a gallon.**

Four and a half ounces of the Extract added to a gallon of simple syrup makes 132½ ounces of root-beer syrup of the highest quality. The Extract, at our gallon rates, will cost you, approximately, 15 cents; the six pounds of granulated sugar required to make the gallon of simple syrup will cost you, say, 60 cents—total, 75 cents.

You can serve at least 100 five-ounce glasses of root beer from the syrup, at a cost of ¾ of a cent a glass; add ¼ cent for plain soda-water—total cost per glass, 1 cent. You sell it for 5 cents. **Profit, 400 per cent!**

ROOT BEER EXTRACT—TRADE PRICES.

1 gallon	$5.00	10 gallons, per gallon	$4.50
5 gallons, per gallon	4.75	25 gallons, per gallon	4.25

FREE—A HANDSOME SIGN.

With an order for a gallon or more of Root Beer Extract we will send you an attractive metal "Root Beer" sign, 6½x9½ inches in size. This sign will stimulate business. Ask for it.

PARKE, DAVIS & COMPANY